



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

THE GROWTH OF MIND AS A REAL AND THE INFLUENCE OF THE FORMAL ON THE REAL

III¹

CHAPTER V

PRE-CONDITIONS OF THE SUCCESS OF THE MIND PROCESS GENERALLY

I. MEMORY

Firstly; memory and imagination do not enter into the dynamic process of mind *as such*, but are pre-conditions of its growth.

Secondly; memory and imagination are not separate faculties of mind but functions in all mind functionings.

(a) *On the attitudinal plane*

Retention.—When conscious mind is aware of any presentation, simple or an aggregated whole (complex totality), it retains (or rather tends to retain) the experience; that is to say, the presentation remains somehow in the mind after it has disappeared from present consciousness. This is Retention—basis of all memory.

Recognition and reminiscence.—Next, when a past experience, *i. e.*, an experience which has passed away from present consciousness but has been retained in the conscious subject, *e. g.*, *a*, a particular stone, recurs in fact (or in representative imagination, see sequel), the conscious subject ‘senses’ it as *a*, and further, as the *same a* which it had previously experienced. (The act of consciousness is numerically different, but the object stone is identical as a consciousness with the stone of prior experience.)

¹ The preceding portions of this article appeared in the January and February numbers of this journal.

Note that we are as yet only in the sphere of sensational or attitudinal (animal) consciousness, and there is as yet no judgment, inasmuch as judgment involves affirmation, and this is possible only when reason emerges. And yet, in a sense, there is a sensational judgment, just as there were several sensational judgments in the primary experiences which constituted *a* the stone for sense. But all these judgments are implicit and written *on* the subject, so to speak, not explicit and affirmed *by* the subject. So regarded, all nature and all its processes are an infinite series of judgments which are ever ready to write themselves on recipient attitudinal consciousness, and there wait for the activity of pure formal reason to be affirmed, and further dialectically dealt with.

This re-sensing of *a*, *i. e.*, the sensing of *a* with the accompanying inward flash of the present *a* as being the same as the *a* previously sensed, is *Remembering* or *Reminiscence*; it is a consciousness of an experience as having been previously experienced, *e. g.*, a dog sees today a man he saw yesterday and recognizes¹ him or remembers him.

Memory, consequently, is a general term embracing retention and recognition.

But the conscious subject is, so far as we have gone, a merely passivo-active thing or entity² responding to the presentations proceeding from external nature (including organic sensation); or, to put it otherwise, there is a dynamical reproduction in consciousness of past presentations.

Imagination.—Further, when the re-presentation of *a* occurs in consciousness as the result of dynamic activities, cerebral or mental, without the presence of *a* in reality, the re-presentation is a presentation of the likeness or “image” of *a*. (This image is sometimes called “subject-object,” to distinguish it from object actually and truly there by itself.)

Thus we find that in the conscious subject there is a tendency to reproduce in and for itself “images” of experiences past, and not now actually existent in its presence. This we call

¹I am sorry to have to use this word “recognition” used by Locke and, I suppose, inherited by him, because of its association with cognition of which there is as yet none; but its connotations are such as to make its application clear. The more exact word would be re-sensing.

²I am intellectually incapable of following the gentlemen who can dispense with an entity.

representative or reproductive imagination. The whole process, however, is as yet dynamical and within the sphere of life-activity and life-process (including reflex-action).

The re-presentation a is "recognized" as identical with the previous presentation of a . It is remembered.

NOTES.—The "image" so-called is not necessarily visual. The perfect memory of a contains all that a was in the primary sensation of it. (It is not association that facilitates the retention and restitution of a presentation, but singleness as associated with the total then content of mind.)

Memory, then, may be defined (generally) as the identifying of a present consciousness with a consciousness formerly experienced. The full and easy recognition of a depends not merely on the unitary re-presentation of a , but also on the re-presentation of all that primarily accompanied a . Presentations and re-presentations (images of presentations) are felt to be similar to prior presentations and representations. This we see in animals. They have, however, to wait for the action of their environment on them, or the dynamical movements in their cerebrum or in sensational mind generally, for recurrences of experiences. This passivo-active memory, which we share with animals, we call it reminiscence.

(b) *On the Plane of Reason*

Will-energy, with form of end implicit, now enters and isolates and affirms by a judgment the present receipt. The receipt is now, in fact, thereby raised to a percept.

Further, the same will-reason can now seek purposely to recover and re-instate past experiences with a view to knowledge. This activo-active memory is to be called *Recollection*, and is, of course, peculiar to the man, or rational, mind alone.

It is manifest that in reminiscence we are wholly in the hands of the dynamic processes of mind and cerebrum, while in recollection we, of our own motion, follow the track of past associations in order to recover the past. An animal cannot "recollect."

Educational reference of the above

Principle of method.—Cultivate memory in accordance with the conditions of remembering. This is obvious enough; for without memory we should have to begin experience every day *de novo*, and unless we observe the conditions we fail.

NOTE.—In cultivating memory we are at the same time cultivating imagination because we are requiring the child to call up re-presentations of what is not present.

CHAPTER VI

CONDITIONS OF REMEMBERING

So far as we have gone we can see, by the analysis of assimilation and memory, the conditions of remembering. These are:—

a On the Sensational plane:

- (a) The presentation of one new thing at a time—or the singleness of the impression; but this so as to be assimilated with the existing content of mind, and constitute a group or a series.
- (b) Vividness and lucidness of the presentation and impression.
- (c) Repetition of impressions.
- (d) Duration of impressions (within the limits of fatigue).¹
- (e) Association of new impressions with time or locality.
- (f) Artificial associations.

b On the Reason plane:

- (a) The emphasizing and accentuation of the thing to be remembered by raising recipience to percipience and thereby affirming the thing. The intensity of the presentation is thereby deepened.

NOTE.—The mental affirmation is further emphasized by being expressed in words; and an association of the thing to be remembered with certain

¹ If after a certain duration the presentation is not clear and assimilated, interest flags. With the young, therefore, we rely mainly on repetition.

words is thereby established. A boy should always be required to speak out and write out what you wish him to remember.

We leave the young to draw their experiences from every casual source; but, when we give them instruction, we intend that they shall remember certain cohering groups of fact and reasoning. Accordingly we tell them, or (what is better) help them to find out, new facts or reasonings, and demand the reproduction of these from time to time. These groups of things taught in school should be representative of experience generally. But whether the groups of facts be geographical, linguistic, literary, scientific, moral, or religious, we have to insist on the pupil remembering them, keeping always in view the conditions of remembering. The practical problem is this: How shall I secure that my pupils will remember what I am about to teach them? The answer—I must observe the conditions of remembering; but, above all, (1) I must adapt myself to the natural process of mind in building itself up; in other words, I must present a single thing, and this of such a kind and presented in such a way as will secure its fitting into the already existing content of mind. (2) I must associate isolated words or things in a series; *e. g.*, in teaching the vocables of a foreign tongue, while these must be mainly learned by reading, we are justified in giving lists of words which have real connections, such as the parts of the body or the furniture in a room, etc. We here have the association of place as well as the real association. It is hard and stupid work to learn lists of unconnected vocables, and even when learned they are quickly forgotten, (3) I must repeat and repeat, and the younger the child is the more of repetition is needed.

Some have written against the memory-work of schools. What they assailed, however, was not memory (this would be absurd) but rote-memory. That is to say, the memory of words and things without understanding them. The principles and rules of method yielded by the process of mind would not result in knowledge were there no memory. It is not worth while to teach anything unless it is to be remembered. Memory, con-

sequently is vital in education, and it is desirable that many things should be learned "by heart."

Can we by exercise strengthen memory? That is to say, can we increase the power of remembering things generally? I do not think we can increase the abstract power of remembering at the attitudinal stage of mind; but by exercising memory in this or that direction we can, as will-reason asserts itself, give a *habit of purposed remembering*. The boy has a new thing properly presented to him and *wills* to remember it. With young children we manifestly cannot rely on this, but only on the conditions of remembering as given above. For example, in a certain definite line of mental acquisition (geographical, historical, linguistic etc.), or in connection with a certain group of facts, the connecting of a new fact with what is already known becomes always more easy and rapid from day to day. But this is not to strengthen memory but rather to facilitate memorizing. It may be said, on the other hand, that a boy of seven takes much longer to learn by heart his first ballad than his second; but this is because the learning of his first ballad has given him easy command of a stock of words and phrases which recur in his second exercise of committing to memory. The power of memorizing the second ballad is thus facilitated but not strengthened (strictly speaking). So with a youth who is studying chemistry. A new chemical fact is at once put in its place and, as coherently associated with the already existing mental stock and so assimilated, it is *easily* remembered. But it does not follow that the pupil is thereby fitted to remember more easily a new fact in biology—a subject which he has not been studying. When we pass into the rational stage of mind, however, we can strengthen the memory, I think, because we are then exercising the pupil in the *purpose* of remembering.

To cause boys to learn certain things by heart has been objected to; but this is, so far, an exercise of reason, because it is an exercise of will with a purpose. Indirectly it is of moral effect inasmuch as it forms the habit of directing the will to ends, an exercise which, as opposed to the casual and drifting life of

the "natural man," is moral in its essential character. But to ask them to learn by heart what they do not understand is, while a discipline, yet a wholly artificial discipline and can have no good result. When memory is weak, let a boy begin by committing a little at a time.

I must cultivate memory then in the young, always observing the conditions of memory: (*a*) In order that knowledge may be acquired and retained: (*b*) in order that memory of new facts in certain selected departments of knowledge may be facilitated; (*c*) in order that the purpose of willing to remember may be exercised and so strengthened.

To write summaries of what is learned is useful: but these summaries and epitomes must be the work of the pupil himself. If done for him, they lose their value, nay, are positively hurtful. And this because the teacher relies on passive receptivity more than on active reproduction. Evoke the will.

Spite of all that can be done, the young will in the course of a few years forget more than they remember. And yet, if they have been well taught, they may be said to remember everything. A boy may have forgotten, for example, all the geometry and algebra which he once knew; but definitions and reasonings, geometrical and algebraic, have so entered into his mind as a possession that he applies himself to a question involving mathematics with a certain facility more or less, and is thus actually using what he has forgotten. This is true of all other subjects of instruction. Disciplinary subjects especially, such as language and mathematics, leave when forgotten a power behind them; and they also leave a certain resultant of knowledge which can not be recalled in detail, but which yet facilitates any new knowledge which the youth may have to acquire, or any new judgment in the affairs of life which he is called upon to form.

We must not, then, be discouraged because a boy, and still more a man, forgets much of what he learned at school. For just as the discipline given by, let us say, Latin, and mathematics, or by instruction in the method of science, leaves an energy and power behind when the Latin, etc., are quite forgotten, so the

memory of things moral, religious, geographical, historical, etc., leaves a deposit of *tendency* to appreciate knowledge on those lines when the facts and doctrines are no longer producible in their didactic form. The large and complex background of the unconscious, let us remember, is constantly determining both our intellectual and moral activity from day to day. We think the right and do the good without waiting to make clear our motives, and, in the majority of cases, without the capacity to do so under any pressure that might be put on us. Thus it is that an instructor who teaches according to the principles of method (in other words, enlightened common sense) has the consolation of knowing that his labor is never lost, cannot be lost. The tendency and facility of mind which instruction gives and the formal power which discipline gives always remain, both in the intellectual and moral sphere, and the seeds of knowledge and of aptitude which the instructor has sown always produce fruit.

If what we have said be true, it is as much the direction of memory as the mere cultivating of it that is our duty; or rather, let us say, the cultivation of memory in certain specific directions is imposed on the teacher. The memories of things and acts abound in every one and go to form both the intellectual and moral character (habit of mind) without our intervention. But all training at the hands of another is *intervention* with a view to a certain end, viz., such knowledge and such habit of mind, intellectual and moral, as promote the ethical end of all education. As an educator, accordingly, I intervene in the natural process that is going on, for the purpose of concentrating memory on experiences which ought to be remembered. For example, by clear presentation and repetition, I give truth to the vague and casual experiences of the child, and, by thus raising recipient attunitions to clear percepts and concepts, I insure an exact basis for knowledge. I insure by repetition the memory of number and form and color, of printed and written words; and so on through all the subjects of school instruction. I pre-occupy the memory, so to speak, with the essential. Still more important, owing to the fact that the child is more than anything

else a creature of moral feeling and emotion, is the pre-occupation of the mind with good feelings and emotions, so as to give a certain set or habit to the motive-forces of conduct. It is the ethical material, or "moral real," of the mind that primarily furnishes motives, just as it is the exercise of the formal energy that gives discipline and will to act. And the process of discipline itself like the acquisition of knowledge, rests on memory; for it is simply the repetition of difficult acts till an intellectual and moral aptitude of habit has been formed. So with religious feeling. I give only so much of the real as the child can take; but I give the best, in order that the religious conceptions and future motives and ideals of the boy and man may be what they ought to be.

I have rested what may be called the method of memory, which includes its conditions, on the dynamic process whereby the mind builds itself up as a real, and on the fact of the will-energy out of which comes a purpose of remembering. The following practical rule will be now obvious:

Rule.—In teaching, repeat and re-repeat, revise and re-revise; and be always falling back on the elementary facts and principles of the subject of instruction, so as to maintain a coherent series of associations, real and logical.¹

II. IMAGINATION.

We found, in following the track of conscious mind in building itself up by help of the materials of recollection, that the receipts of objects tended to reproduce themselves for mind when the object itself has been removed. This is called imaging

¹ Memory, in the sense of retention, originally involves a certain affection of the nerve tissue when I first become aware of *a*, and also the said awareness or consciousness. Thus retention, like sensation and perception, must be a dual act, or, as I prefer to put it, one act in two moments (mind and matter). If either of these fail the sensation will not be retained, and cannot, consequently, be reproduced. In the same way either of the moments may set in motion the other. An excitement of the nerve disposition, which was the condition of my original consciousness of *a*, will set up the consciousness *de novo*. So an excitement in the conscious mind-moment (caused by association or otherwise) may set up the nerve disposition and the reconsciousness be thereby affected. It is quite possible to conceive that the one moment may be active and the other dead or asleep or half awake only, and then the consciousness would

or imagination; and as the primary experience (sensible, percept, thought) arises out of an actual presentation to consciousness of a past experience, we call this imaging Re-presentative or Re-productive imagination. Without this connate tendency of mind and brain we could make little progress in knowledge, for we should be entirely dependent on the actual presence of everything we thought about. There would be no memory save in the sense of recognition of actual presentations as being old presentations. Imagination, then, is simply the reproduction in sensation of the impression made by an object which is now no longer present—the re-presentation of a presentation. We thus repeat and revise our sensations and all mental experiences, and are not left entirely at the mercy of objects in actual presentation at the moment.

(a) *On the plane of intuition* we have merely Representative imagination.

(b) *On the plane of reason* we have Productive or Constructive imagination.

Here the will, of set purpose, seizes representates or images that dynamically arise, re-perceives them, searches for images with a productive purpose and constructs imaginary wholes. What the mind retains is thus molded into fresh relations and ideal products, and this activity is in a high degree educative. In a large proportion of the lessons we give to children we have to speak of things which have never been directly experienced, and are consequently calling into activity the constructive imagination. It is manifestly absurd to do this unless we can rely on the previous experiences of the child for the construction in imagination of the new thing.

The principle of education which this yields is:

not be effected at all. The original experience would be unrecallable, not merely because both moments were inoperative, but only because one of them was dead. The experience is simply lost and goes for nothing.

We know, as a matter of fact, that the nerve disposition, like any other. physical impression, may be wiped out. It is within the region of hypothesis at least that the mind disposition, or affection, or what not, may remain. But of the mind moment, as such, we know nothing save by its manifestations.

Cultivate the imagination.

And this we do :

(a) By allowing free play to the representative imagination (a child educates himself even by day-dreaming).

(b) By calling for the reproduction of past experiences, whether of things seen, or of narratives, events, or reasonings.

(c) By evoking the productive imagination, through the furnishing of the child with productive work, as in fairy tales, narratives of events, simple poetry, and so forth. All this is necessary to the rich growth of mind as a substantive reality ; and this quite apart from the æsthetic and ethical importance of such instruction : ethical as well as æsthetic, I say, because all such activity involves the construction of ideals.

NOTE.—I have spoken of certain functions of conscious mind which are the pre-conditions of the possibility of building up mind as a real. These pre-conditions cannot correctly be called universals, because this term has been reserved for the ever-present characteristics of actual experience when the conscious mind begins to be conscious of that which is not itself. As regards this experience the most universal of universals are space and time. I can be conscious, as a creature of mere sense, of nothing which is not in time, and of nothing external which is not in space. But this does not mean (as is too commonly assumed) that the real experience is plunged in abstract entities which are called space and time. It only means that the experience of this or that thing or the totality of things has always, and necessarily, time and space as two of its elements.

To speak of abstract time and space as if they were realities *per se*, whereas they are merely universal attributes of presented realities, is misleading. Time and space are themselves part of the phenomena or object. They are a mere reflection in and by the sentient consciousness of the facts of existence, the actual extension of outness, and the actual sequence of events.

It is the necessariness of these perceptions which has led to their being elevated to the position of abstract wholes *in* which all things exist. But necessariness simply means that things are so ; and to think things otherwise than as they exist and are given is not possible for a consciousness which is itself part of the system of things. Sense, it is said, may give universality, but it cannot give necessity ; therefore, space and time are innate or *a priori* forms of sentience which receive and mould all those stimuli which set up the consciousness of an object. The result of this way of looking at experience

is a dualism which leaves a gap between conscious subject and object, and severs man from reality by establishing a system of relativity which wipes out the absolute and objective truth of the whole world of consciousness, and not merely of the external world. Objective reality or truth becomes an x or unknown quantity, and even for this x itself there is no guarantee. The objective reality which we feel (sense and perceive) is, in truth, the true objective reality as it exists, or rather, it exists as we see it. It is not the relative but the absolute truth of things. I do not urge as an argument that to deny this is to affirm a cosmic fiasco, because the whole cosmic system might, after all, be a fiasco; but I would point out that, if we can only shake ourselves free of a crude dualism, we shall at once see that the conscious mind is as much involved in the system of which it forms a part as a tree or a stone, and that it differs from these only in being conscious, and so reflecting and absorbing into itself truly that which truly exists. To think the existence of any particular thing (*e. g.*, a tree or a stone) otherwise than as it is given is manifestly impossible without destroying its identity; so also, to think that which is a universal character of all existences otherwise than as it is given is to think a different cosmic system to that in which we are involved, and this also is impossible until we have got outside the system; which again is an impossibility. Let us be content with our system and proceed to the interpretation of it. And the interpretation is an interpretation of the data in consciousness which is also at the same time the interpretation of non-subject; and further, it is the interpretation of the activity of self-consciousness or dialectic which also is the dialectic of the datum or object becoming alive in us as individual subjects, and so making the subject alive to the dialectic permeating the universal object or universal reality, which the subject *must* conceive dialectically; for there is no other way.

S. S. LAURIE

UNIVERSITY OF EDINBURGH